

Editorial

Paula McMahon BEng, Dip Man, CEng, FICE
Sir Robert McAlpine, Stockton-on-Tees, UK



It is my great pleasure to welcome you to the May 2019 issue of *Civil Engineering*.

Our lead paper (Climie and Shackman, 2019) is the first of two parts on the Queensferry Crossing in Scotland. Successfully delivered under budget, it is the country's largest infrastructure project in a generation. The paper covers the design and construction of the foundations, towers and spectacular cable-stayed superstructure.

I was particularly interested in the bespoke self-climbing 'jump-forms', which provided the flexibility needed to construct the tapering towers safely and effectively. The integrated team also ensured excellent communication at all levels, contributing significantly to the project's success. Part 2 on the approaches will be published in August 2019 issue.

The second paper (Wang *et al.*, 2019) describes innovations in submarine pipeline installations in China. The 'piggyback' pipeline research will help deliver more effective installations in water bodies throughout the world, providing more flexible and cost-effective options for energy and data infrastructure for future generations.

Our third paper (Quigg, 2019) describes how a cable tunnel threaded its way through live services and railways in subterranean London, UK. It is a great example of how a complicated project can be delivered through the integration of planning and engineering. The use of different solutions also demonstrated how old and new technologies can be used side by side.

Each of the projects described in our first three papers used available technology including software analysis, structural health monitoring and planning tools. But there is no doubt we are living in an age of rapid technological advancement. Who can now imagine life without a smartphone? Yet Apple launched its first iPhone in 2007, only 12 years ago. Our two final papers give us food for thought on what may be our next 'must-haves'.

Slovenian researchers Štefanič and Stankovski (2019) review current technologies and applications for smart construction, after which Yu *et al.* (2019) provide a Chinese perspective on smarter construction site management. The new ideas they consider will mostly likely change the way civil engineers work in the near future.

Details of technology to increase analysis speed, provide better access to information, improve safety on-site, automate early warning systems and improve planning are all discussed. This new networked society will aid collaborative global working and overcome communication barriers through advanced system integration protocols.

I hope you enjoy this issue and trust it encourages you to seek opportunities to apply technological advances and collaborative working to your own projects.

We are all key in working towards building diverse, inclusive and collaborative teams regardless of our project role. Each of us can make small but significant steps towards change every day. Let us encourage the very best from our current teams and work towards future successes with project teams that more closely reflect the diverse society we serve.

Many organisations such as the Women's Engineering Society are assisting the Institution of Civil Engineers (ICE) and industry in working towards the goal of promoting civil engineering as a career. Both organisations have a full programme of planned activities for 'Transform the Future', the sixth International Women in Engineering Day on 23 June 2019. All ICE members can actively help with the continued promotion of civil engineering as a career for all. I encourage you to get involved – see Chen and Ali (2019) on the next page for more details.

If the papers in this issue have inspired you to write about your own work and experience, please refer to the ICE Virtual Library. This provides details on how to publish with us as well as access to all newly accepted papers 'ahead of print'.

References

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- Yu Z, Peng H, Zeng X *et al.* (2019) Smarter construction site management using the latest information technology. *Proceedings of the Institution of Civil Engineers – Civil Engineering* **172(2)**: 89–95, <https://doi.org/10.1680/jcien.18.00030>.

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